CLAIMS

What is claimed is:

1. A probe tip alignment method for a precision liquid handler having a probe drive system and a locator bed holding sample wells, said method comprising performing the following steps:

inserting a probe tip with the probe drive system into a locator well at a known position on the locator bed; and

determining the position of the probe tip in the locator well;

said determining step including moving the probe tip with the probe drive system into contact with a plurality of points on the side wall of the locator well; and

sensing the contact of the probe tip against the side wall of the locator well.

2. The probe tip alignment method claimed in claim 1, said sensing step including detecting electrical contact between the probe tip and the side wall of the locator well.

3. The probe tip alignment method claimed in claim 1, said moving step including:

driving the probe tip back and forth along a first axis into contact with first opposed points on a circular portion of the side wall of the locator well;

placing the probe at a point midway between the first opposed points;

driving the probe tip back and forth along a second axis orthogonal to the first axis into contact with second opposed points on the side wall of the locator well; and

placing the probe at a point midway between the second opposed points.

4. The probe tip alignment method claimed in claim 3, said moving step further including:

driving the probe tip back and forth along a third axis parallel to the first axis into contact with third opposed points on the side wall of the locator well; and

placing the probe at a point midway between the third opposed points.